

CLAIMS

1. A method of preparing a catalyst comprising particles of noble metal dispersed on micron sized or larger alumina particles, said method comprising:

dry coating nanometer sized metal oxide particles on the surface of said alumina particles to form composite carrier particles for said noble metal;

dispersing particles of a noble metal on the surface of said composite carrier particles by mixing a solution of noble metal compound with said composite carrier particles to produce a mixture;

evaporating the solvent for said solution from said mixture; and

calcining the mixture to decompose said noble metal compound and disperse noble metal particles on said composite carrier particles.

2. A method as recited in claim 1 in which the solution of noble metal compound is an aqueous solution of a salt of said compound and said noble metal is one or more noble metals selected from the group consisting of platinum, palladium and rhodium.

3. A method as recited in claim 1 wherein said dry coating step comprises repeatedly propelling a mixture of said oxides and alumina particles against an impact surface at a high velocity.

4. A method as recited in claim 1 wherein said dry coating step comprises continually shearing a mixture of said oxides and alumina particles between two rotating surfaces.

5. The method as recited in claim 1 in which said metal oxide is selected from the group consisting of cerium oxide, lanthanum oxide, zirconium oxide, aluminum oxide, or mixtures thereof.

6. The method as recited in claim 1 in which said metal oxide is aluminum oxide.

7. A method of preparing a catalyst comprising particles of noble metal dispersed on micron sized or larger alumina particles, said method comprising:

dry coating nanometer sized metal oxide particles on the surface of larger alumina particles such that said metal oxide particles adhere to the surface of said alumina to form composite carrier particles, said metal oxide particles being of a metal oxide selected from the group consisting of cerium oxide, lanthanum oxide, zirconium oxide, aluminum oxide, or mixtures thereof;

soaking said composite carrier particles with an aqueous solution of a compound of a noble metal selected from the group consisting of platinum, palladium, rhodium, or mixtures thereof;

drying said soaked particles; and

calcining the dried particles to decompose said noble metal compound and disperse noble metal particles on said composite carrier particles.

8. A method as recited in claim 7 wherein said dry coating step comprises repeatedly propelling a mixture of said oxide and alumina particles against an impact surface at a high velocity.

9. A method as recited in claim 7 wherein said dry coating step comprises continually shearing a mixture of said oxide and alumina particles between two rotating surfaces.